

IN THE CLAIMS

The following are Claims 1-27.

1. (original) A circuit comprising:

a first transistor adapted to connect an output terminal of a first power supply to a first load;

a second transistor adapted to connect a sense terminal of the first power supply to the first load; and

a controller adapted to provide an output signal to the first transistor and the second transistor to control the first transistor and the second transistor.

2. (original) The circuit of Claim 1, wherein the controller switches on the first transistor and the second transistor to apply power from the first power supply to the first load and provide remote sensing from the first load to the first power supply at approximately the same time.

3. (original) The circuit of Claim 1, wherein the controller is programmable to vary a ramp rate of the output signal to control a voltage level ramp rate at the first load.

4. (original) The circuit of Claim 1, further comprising:

a third transistor adapted to connect an output terminal of a second power supply to a second load; and

a fourth transistor adapted to connect a sense terminal of the second power supply to the second load, wherein the controller provides the output signal to the third transistor and to the fourth transistor to control the application of power from the second power supply to the second load and provide remote sensing from the second load to the second power supply at approximately the same time.

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5. (original) The circuit of Claim 4, wherein the controller controls the first, second, third, and fourth transistors to provide voltage tracking at the first load and the second load.

6. (original) The circuit of Claim 1, wherein the first and second transistors are power MOSFETs.

7. (original) The circuit of Claim 1, wherein the first and second transistors are a power MOSFET and a signal level MOSFET, respectively.

8. (original) The circuit of Claim 1, further comprising:  
a first resistor coupled between the controller and the first transistor; and  
a second resistor coupled between the controller and the second transistor, wherein the output signal is provided to the first and second transistors via the first and second resistors, respectively.

9. (original) The circuit of Claim 1, wherein the first power supply and the first load form part of the circuit.

10. (original) A power supply system comprising:  
a power supply adapted to provide a first voltage;  
a load adapted to receive the first voltage from the power supply;  
a first transistor coupled to an output terminal of the power supply and to the load;  
a first resistor coupled to a gate terminal of the first transistor;  
a second transistor coupled to a sense terminal of the power supply and to the load;  
and

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a second resistor coupled to a gate terminal of the second transistor, wherein a first control signal provided via the first resistor and the second resistor controls the first transistor and the second transistor, respectively.

11. (original) The power supply system of Claim 10, further comprising a controller adapted to provide the first control signal to control the first transistor and the second transistor.

12. (original) The power supply system of Claim 11, wherein the controller switches the first and second transistors on and off at approximately the same time.

13. (original) The power supply system of Claim 11, wherein the controller is programmable to control the first and second transistors to vary a ramp rate of the first voltage at the load.

14. (original) The power supply system of Claim 10, further comprising:  
a plurality of power supplies adapted to provide corresponding voltages;  
a plurality of third transistors coupled to corresponding output terminals of the corresponding plurality of power supplies and to the load;  
a plurality of third resistors coupled to a gate terminal of corresponding ones of the third transistors;

a plurality of fourth transistors coupled to corresponding sense terminals of the corresponding plurality of power supplies and to the load;

a plurality of fourth resistors coupled to a gate terminal of corresponding ones of the fourth transistors; and

a controller adapted to provide the first control signal via the first, second, third, and fourth resistors to control corresponding ones of the first, second, third, and fourth transistors.

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15. (original) The power supply system of Claim 14, wherein the controller provides voltage tracking of the first voltage and the corresponding voltages supplied to the load.

16. (canceled) A method of providing remote voltage sensing at a load, the method comprising:

providing a supply voltage from a power supply to the load; and

providing feedback of the supply voltage at the load to the power supply, wherein the providing of the supply voltage and the providing of the feedback occurs approximately simultaneously via a first control signal.

17. (canceled) The method of Claim 16, further comprising controlling a ramp rate of the voltage level at the load.

18. (canceled) The method of Claim 16, further comprising:

providing a plurality of supply voltages from corresponding power supplies to the load; and

providing feedback of the plurality of supply voltages at the load to the corresponding power supplies, wherein the providing of the corresponding power supplies and the providing of the feedback occurs approximately simultaneously via the first control signal.

19. (canceled) The method of Claim 18, further comprising controlling voltage levels of the supply voltage and the plurality of supply voltages to provide voltage tracking.

20. (canceled) The method of Claim 16, further comprising setting resistance values for corresponding signal paths of the first control signal for the providing of the supply voltage and the providing of the feedback, respectively.

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21. (original) A power supply control circuit comprising:  
a power supply controller adapted to provide a control signal to control the application of a power supply voltage from a power supply to a load, the power supply controller comprising:

an output terminal adapted to provide the control signal; and

a first transistor, under control of the power supply controller via the control signal, adapted to connect a feedback path for remote sensing from the load to the power supply at approximately the same time as the application of the power supply voltage from the power supply to the load.

22. (original) The circuit of Claim 21, wherein the control signal controls a second transistor coupled between the power supply and the load to control when the power supply voltage is provided to the load.

23. (original) The circuit of Claim 22, further comprising:

a first resistor coupled between the power supply controller and the second transistor;

and

a second resistor within the power supply controller and coupled to the first transistor, wherein the control signal is provided to the first and second transistors via the second and first resistors, respectively.

24. (original) The circuit of Claim 23, wherein resistance values of the first and second resistors determine a turn-on time constant of the second and first transistors, respectively.

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25. (new) A power supply circuit comprising:

a first switching means for selectively coupling a power supply voltage from a first power supply to a first load;

a second switching means for selectively coupling the first load to a sense terminal of the first power supply; and

means for controlling the first and second switching means to provide at substantially the same time the power supply voltage to the first load and feedback from the first load to the sense terminal.

26. (new) The power supply circuit of Claim 25, further comprising:

a third switching means for selectively coupling a power supply voltage from a second power supply to a second load; and

a fourth switching means for selectively coupling the second load to a sense terminal of the second power supply; wherein the controlling means controls the third and fourth switching means to provide at substantially the same time the power supply voltage from the second power supply to the second load and feedback from the second load to the sense terminal of the second power supply.

27. (new) The power supply circuit of Claim 26, wherein at least one of the first power supply and the second power supply is a DC to DC converter.

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